Inheritance as useful notion in a usage-based constructicon

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Overview

- Background
- Relations in the constructicon
- General observations
- Observations from the substantive end
- Conclusions

Background

- Linguistic knowledge consists entirely of constructions
- All constructions have a form & a meaning
- Examples of constructions include morphemes, words, phrases, sentences, etc.
- Constructions exist at different levels of schematicity
- Constructions can be combined
- Some words, phrases, sentences may be constructs, not constructions (= are not stored at substantive level)

Relations in the Constructicon

- Relationships between and among constructions are captured via a default inheritance network. “[A more substantive construction] inherits […] from the more general, abstract one.” (Goldberg 2013:21)
- “Asymmetric inheritance links are posited between constructions which are related both semantically and syntactically.” (Goldberg 1995:72)
- “By postulating abstraction hierarchies in which lower levels inherit information from higher levels, information is stored efficiently and made easily modifiable.” (Goldberg, 1995:72)
- “Broad generalizations are captured by constructions that are inherited by many other constructions; subregularities are captured by positing constructions that are at various midpoints of the hierarchical network.” “… ‘Exceptional patterns are captured by low-level constructions.’” (Goldberg 2006:13-14)
Relations in the Constructicon

- "Four major types of inheritance links" (Goldberg 1995)
- Instance Links: "when a particular construction is a special case of another construction; that is, an instance link exits between constructions iff one construction is a more fully specified version of the other."
- Subpart Links (e.g. "Trivially, every complex syntactic construction consists of a range of smaller phrasal constructions." cf Hilpert 2014:63), "the pervasiveness of these links that turns the construct-i-con into a densely woven fabric of constructions, rather than a mere hierarchy of constructions." (Hilpert 2014:65)

Some general observations

- Requirements: a formal, self-contained model vs. psychologically, acquisitionally and socially plausible explanatory model
- Inheritance: metaphor from biology, via computer science (Diessel 2023:5)
- Hierarchical and asymmetric (in the classical and dominant model)
- Between constructions (not constructions + constructs), the difficulty of telling directionality of 'inheritance' / whether it is unidirectional.
- The reality and importance of directional complexity
- Usage occurs at the substantive level, schematisations are inferred

Observations from the substantive

<table>
<thead>
<tr>
<th>long time no</th>
<th>forTenTen2T (52 billion words)</th>
</tr>
</thead>
<tbody>
<tr>
<td>see</td>
<td>6,053</td>
</tr>
<tr>
<td>talk</td>
<td>665</td>
</tr>
<tr>
<td>post</td>
<td>525</td>
</tr>
<tr>
<td>hear</td>
<td>475</td>
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<td>speak</td>
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<tr>
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<td>224</td>
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<tr>
<td>feed</td>
<td>800</td>
</tr>
<tr>
<td>update</td>
<td>166</td>
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<td>blog</td>
<td>107</td>
</tr>
<tr>
<td>review</td>
<td>64</td>
</tr>
<tr>
<td>write</td>
<td>91</td>
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<tr>
<td>read</td>
<td>69</td>
</tr>
<tr>
<td>type</td>
<td>60</td>
</tr>
<tr>
<td>comment</td>
<td>47</td>
</tr>
</tbody>
</table>

Some general observations

- Acquisition research shows how schematic representations are built from substantive input
- The difficulty of de-coupling acquisition from a usage-based system (constant adjustments of schematic forms, constant acquisition)
- The asymmetry implied in 'inheritance' makes most sense in models of parsimonious rather than redundant storage (the rule-list fallacy)
Observations from the substantive end

Welsh mutations, Welsh plurals

<table>
<thead>
<tr>
<th>Stemmed</th>
<th>Nenned</th>
<th>Stegled</th>
</tr>
</thead>
<tbody>
<tr>
<td>p</td>
<td>b</td>
<td>mh</td>
</tr>
<tr>
<td>t</td>
<td>d</td>
<td>nh</td>
</tr>
<tr>
<td>g</td>
<td>b</td>
<td>ph</td>
</tr>
</tbody>
</table>

King (2003)

Observations from the substantive end

Welsh mutations, Welsh plurals

Apply in certain constructions, e.g. after certain prepositions
Yn (in) + Caerdydd (Cardiff) → yng Nghaerdydd
O (from) + Caerdydd (Cardiff) → o Gaerdydd
But uncommon placenames abroad do not receive a mutation

Observations from the substantive end

Set phrases

Observations from the substantive end

Generalisations via (instantiation-)inheritance encourages proliferation of weighty schematic constructions
Analogy via schematic construct more plausible

If: Nouns (2010); Muff (2013); Langoel (2010); Hansea and Subsistence (2010); Moeil (1998) and others

Plural suffixes

<table>
<thead>
<tr>
<th>Suffix</th>
<th>Pl.</th>
<th>English</th>
</tr>
</thead>
<tbody>
<tr>
<td>-air</td>
<td>ior</td>
<td>“shaps”</td>
</tr>
<tr>
<td>-ian</td>
<td>ced</td>
<td>“chairs”</td>
</tr>
<tr>
<td>-iad</td>
<td>bwy</td>
<td>“buses”</td>
</tr>
<tr>
<td>-i</td>
<td>pel</td>
<td>“balls”</td>
</tr>
<tr>
<td>-on</td>
<td>awel</td>
<td>“bees”</td>
</tr>
<tr>
<td>-oedd</td>
<td>mør</td>
<td>“bees”</td>
</tr>
<tr>
<td>-ydull</td>
<td>afon</td>
<td>“rivers”</td>
</tr>
<tr>
<td>-edd</td>
<td>efnw</td>
<td>“nails”</td>
</tr>
<tr>
<td>-ed</td>
<td>merch</td>
<td>“girls”</td>
</tr>
<tr>
<td>-aint</td>
<td>gaf</td>
<td>“blacksmiths”</td>
</tr>
<tr>
<td>-aid</td>
<td>estron</td>
<td>“foreigner”</td>
</tr>
</tbody>
</table>
Observations from the substantive end

Welsh plurals

Apart from suffixation, there are 7 more ways of forming plurals (Binks, 2017), e.g.

- Closed set of nouns with singular formed from plural, e.g. deletion: (sometimes with vowel change)
  - sg. coeden [kɔeden] - pl. coed [kɔːed] “trees”

- Vowel changes in combination with suffixation

- Dedicated suffixes for singular and plural (+ vowel change or not)

- Penultimate vowel or first and penultimate vowel change:

- Suppletion (unrelated form):

Extremely complex paradigms make substantive storage likely!

Evidence from language use that substantive forms are primary

‘inheritance’ places the emphasis in the wrong place
‘inheritance’ may have got the directionality wrong

Conclusions

Is ‘inheritance’ a necessary/useful concept?

- ‘inheritance’ makes most sense in a parsimonious model
- given directional complexity, generalisation and instantiation appear more useful
- ‘inheritance’ places the weight in the wrong place (at the schematic end)
- ‘inheritance’ as predominant relation structuring the construction can lead to unhelpful modelling (e.g. relations like analogy must be given greater weight in explaining ad-hoc and more permanent constructs/constructions)

No.

References


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